Blood transfusion services in Africa should suit local contact—funders take note

September 11 2012

Scientists find that Western approach to blood transfusion employed in Africa - often a condition of financial aid - may add significant cost to blood units, due to emergency nature of most African patients in need of transfusion.

Recommendations made by organisations in rich Western nations when providing financial aid to many African countries for blood transfusion services are unnecessarily increasing the cost of 'safe blood' in sub-Saharan Africa, says a new paper published today.

The publication shows that conditions placed on aid for blood services – driven by concerns around HIV infection – such as centralising blood banks and using only unpaid volunteer donors, create barriers that increase the cost of a unit of blood in Africa and will lead to long-term

reliance on external funding.

Well-intentioned international organisations that contribute money could be having a detrimental effect on blood services in sub-Saharan Africa by focusing on HIV security issues and using standard practices from wealthy countries that do not translate to the developing world, says the paper.

Co-signed by 25 individuals from five continents with direct involvement in African blood transfusion issues, the paper is published today in *PLOS Medicine*.

The authors argue that – while the Western models imposed on African blood services have brought some benefits – unintended negative consequences mean that approaches to funding blood services in the sub-Saharan region need to be urgently reviewed.

Whereas use of blood product in the West and high-income countries is often pre-planned or predictable, with 90 per cent of transfusions planned, the vast majority of transfusions in Africa are emergencies, between 80 to 90 per cent.

In sub-Saharan countries that receive financial aid from affluent nations, like Uganda and Rwanda, between 50 and 80 per cent of transfusions are related to a small number of similar emergency traumas – such as haemorrhaging in women as a result of childbirth and severe anaemia in children due to malaria – for which mortality may increase by 25% or more if transfusion is delayed by more than two hours.

The paper suggests that employing the Western practice of centralising blood services in sub-Saharan Africa, where communications and transports links are unreliable and fuel shortages commonplace, inevitably results in delays that cost lives. Bespoke facilities are generally

located in major urban areas, so rural populations struggle to get blood products in time.

Equally, insistence on relying only on unpaid volunteer donors can lead to shortages in supply, according to the paper. Volunteer donors in sub-Saharan Africa are predominantly secondary school students unavailable during school recesses and exam periods, restricting blood supply for up to three months every year.

Collecting blood from paid donors is notoriously unsafe due to HIV risk and banned in most African countries, but still happens as a last resort. The paper argues that areas lacking facilities such as computerised donor registers have trouble distinguishing this from the family members of patients ready to donate blood – leading to the exclusion of all family donors who constitute a cheaper and substantial source of blood.

For the paper's authors, family donors should be a key target group for donation, but this relies on hospitals themselves having more localised blood service resources, rather than the centralised blood banks that – while sound practice in wealthy countries – are not as effective in Africa.

Splitting up blood into its different components such as platelets, plasma and red cells is another common Western practice becoming prevalent in African countries that receive external funding.

The authors contend that while this approach is legitimate in the West, 'whole blood' is most often the best product for emergency transfusions – which constitute the vast majority of cases in Africa – but is regularly unavailable, as donations have been systematically split up.

African countries that don't receive external financial aid almost exclusively prepare 'whole blood' through their nationally funded blood

services.

The paper's authors claim that all of these factors are contributing to an unnecessary inflation in the cost of blood and blood product in those African countries receiving financial aid, as much as "three to six times in aggregate" according to Professor Jean-Pierre Allain from the Department of Haematology at the University of Cambridge, one of the lead authors of the paper.

The authors recommend that devolved blood services in hospitals are developed in parallel with centralised blood services, family-replacement donors are targeted as well as unpaid volunteers and the splitting of blood into its components is dictated by clinical requirement, with 'whole blood' availability dramatically increased.

"Implementation of policies and practices from funding countries are not necessarily appropriate for sub-Saharan Africa, where the vast majority of transfusions are done as emergencies," said Allain. "Force-fitting Western transfusion systems to settings with quite different needs is resulting in an increase of the cost of blood or blood products. If uncorrected, this trend will make transfusion unaffordable to sub-Saharan countries, especially when funding from wealthy nations disappears in the future."

"Clearly, such negative consequences are not the intention of these programmes, which have built and equipped large blood centres and trained a generation of transfusion specialists."

"However, acknowledging that patients' lives may be endangered warrants careful reflection and a search for alternatives," continued Allain. "Flexibility and pragmatism are necessary to reduce the unacceptably high rates of unnecessary deaths in Africa because blood for transfusion is lacking."

Medical Xpress

More information: Ala F, Allain J-P, Bates I, Boukef K, Boulton F, et al. (2012) External Financial Aid to Blood Transfusion Services in Sub-Saharan Africa: A Need for Reflection. PLoS Med 9(9): e1001309. doi:10.1371/journal.pmed.1001309

Provided by University of Cambridge

Citation: Blood transfusion services in Africa should suit local contact—funders take note (2012, September 11) retrieved 1 July 2024 from https://medicalxpress.com/news/2012-09-blood-transfusion-africa-local-contactfunders.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.